



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/386,605	08/31/1999	CHRISTOPHER G. TAYLOR	38-21-(15757	1594

27161 7590 10/06/2004

MONSANTO COMPANY  
800 N. LINDBERGH BLVD.  
ATTENTION: G.P. WUELLNER, IP PARALEGAL, (E2NA)  
ST. LOUIS, MO 63167

EXAMINER

HELMER, GEORGIA L

ART UNIT	PAPER NUMBER
----------	--------------

1638

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/386,605

Applicant(s)

TAYLOR ET AL.

Examiner

Georgia L. Helmer

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-5 and 7-26 is/are pending in the application.
- 4a) Of the above claim(s) 12-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5 and 7-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2 December 2003.

### ***Status of the Claims***

2. Claims 1, 3-5, and 7-26 are pending. Applicant has cancelled claims 2 and 6, and amended claims 1 and 7. Claims 12-26 are withdrawn as being drawn to non-elected invention(s). Claims 1, 3-5, and 7-11 are examined in the instant action.

3. All rejections not addressed below have been withdrawn.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Priority***

5. Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged. However, the provisional application upon which priority is claimed (60/098,402) fails to provide adequate support under 35 U.S.C. 112 for claims 1, 3-5, and 7-11 of this application. Accordingly, Applicant shall have benefit of the date of filing of the non-provisional Application, 31 August 1999.

***Claim Rejections – 35 USC§112, second paragraph***

6. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 is to the method of claim 4 where in the transgenic root development is initiated in the inoculated hypocotyl by placing the inoculated hypocotyl regions in a media containing  $\frac{1}{4}$  MS. It is unclear which portion of the media is  $\frac{1}{4}$ .

Clarification and/or correction are required.

***Claim Rejections – 35 USC§112, first paragraph***

7. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 5 is the method of claim 3 where in the *Agrobacterium rhizogenes* is strain K599. The specification lacks sufficient evidence that the claimed biological material is either 1) reproducible, 2) known and readily available to the public, or 3) deposited in compliance with 37 CFR 1.801-1.809. If the claimed biological material was deposited under the provisions of the Budapest treaty, Applicant must provide a declaration stating that the claimed biological material was made under the provisions of the Budapest treaty in compliance with 37 CFR 1.801-1.809, and that all restrictions imposed by the depositor on the availability to the public of the deposited biological material will be irrevocably removed upon the grant of the patent. Applicant's attention is directed to 37 CFR §§1.801-1.809, MPEP §§ 2402-2411.05 and In re

Art Unit: 1638

Lundak 773 F.2d 1216, 227 USPQ 90 (Fed. Cir. 1985) for further information concerning the Rules and Regulation for Deposit of Biological Materials for Patent Purposes.

***Claim Rejections – 35 USC §102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4 and 8-11 are rejected under 35 U.S.C. 102 (b) as being anticipated by Tulson et al (EP 0262972 A2 published April 6, 1988).

Tulson teaches a method of producing a stably transformed chimeric cucumber having transgenic root tissue. Tulson et al teach obtaining an hypocotyl explant (page 5, lines 30-40), inoculating with *Agrobacterium rhizogenes* (page 5, lines 52-55), culturing (page 5, lines 52-55), and producing plants (page 6, lines 1-15). Tulson teaches obtaining an explant (page 5, lines 30-40) where the explant is a hypocotyl with the cut end below the cotyledon. Re claim 4, Tulson teaches the cut end of the hypocotyl being contacted with *Agrobacterium rhizogenes* (page 5, lines 52-55). Re claim 8, Tulson teaches placing the inoculated hypocotyl on a medium containing MS (page 6, lines 4-6). Applicant is reminded that use of ¼ MS is indefinite as discussed above and thereby is given no weight in this discussion. Re claim 9, Tulson teaches placing the inoculated hypocotyl on a medium containing MS and a selectable agent.

Art Unit: 1638

(Page 6, lines 7 and 8). Re claim 10 and 11, Tulson teaches using kanamycin wherein the concentration of kanamycin in the media is 25 mg/L (page 7, lines 22-28), which is less than 50 mg/l.

Applicant defines a "chimeric plant" (specification., p. 4) as a plant having only a portion of its cells transgenic. Tulson's original plant material ( p. 5, lines 52-60) was a wild-type green cucumber seedling which had been inverted, cut at the hypocotyl , the cut end inoculated with *Agrobacterium rhizogenes*, and the inoculated end allowed to root. Tulson (p. 6, lines 45-55) harvested 690 roots from *Agrobacterium rhizogenes*-inoculated hypocotyl sections. Of these roots, 64 regenerated plantlets, 22 of which were positive for NPTII, the transgenic selection marker. Of the regenerated plantlets (11) which had never been selected for NPTII expression using kanamycin selective growth conditions, two plantlets were positive for NPTII, as determined by the in vitro assay. Since these two plants had never been selected on kanamycin, the mother roots from which they came were transgenic for NPTII. However the mother plant (hypocotyl + stem + other green parts) was otherwise wild-type, since only newly growing roots would have been transformed. The protein encoded by the NPTII gene confers kanamycin resistance to plants expressing this gene. Cucumber is a dicotyledonous plant.

Accordingly, Tulson anticipates the claimed invention.

9. Claims 1, 3, and 7 are rejected under 35 U.S.C. 102 (b) as being anticipated by Rech et al, Plant Cell Reports 8:33-36 (1989) Re claim 1, Rech teaches obtaining an hypocotyl explant (page 33), inoculating with *Agrobacterium rhizogenes* (page 33),

Art Unit: 1638

culturing (p33), and producing plants (p34). Re 3, Rech teaches obtaining an explant where the explant is a hypocotyl with the cut end below the cotyledon (p33). Re claim 4, Rech teaches the cut end of the hypocotyl being contacted with *Agrobacterium rhizogenes* (p 33). Re claim 7, Rech teaches obtaining an explant from a dicot where the dicot is soybean (p 33). Accordingly Rech anticipates the claimed invention.

**Remarks**

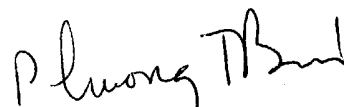

10. No claim is allowed.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Georgia L. Helmer whose telephone number is 571-272-0796. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on 571-272-0804. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Georgia Helmer PhD  
Patent Examiner  
Art Unit 1638 – Transgenic Plants  
27 September 2004

  
10/1/04

PHUONG T. BUI  
PRIMARY EXAMINER